ISRO's Plans for Launching Satellites during Ninth Plan

1084. SHRI NARENDRA MOHAN: Will the PRIME MINISTER be pleased to state:

(a) what are the ISRO's plan for launching Satellites during Ninth Five Year Plan and whether these plans are going to be implemented through technology which has been developed in India;

(b) whether the country has been able to develop a proper technology for launching the Satellites and putting them in the correct orbit; and

(c) if so, what are the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY AND THE MINISTER OF STATE OF THE MINISTRY OF POWER (SHRI YOGINDER K. ALAGH): (a) to (c) The Polar Satellite Launch Vehicle (PSLV) completely developed in India can launch all the remote sensing satellites planned for launch in the 9th plan. Development of Geosynchronous Satellite Launch Vehicle (GSLV) capable of launching INSAT satellites is in progress. The first developmental flight is expected in 1998-99. Plans for increasing the capability of GSLV have also been made.

Accordingly, ISRO has planned the following satellites to be launched during Ninth Plan:

Satellite	Launch Vehicle Planned
INSAT-2E	— Procured launch
INSAT-3A	— Procured launch
INSAT-3B	— Procured launch
Technology payload	— GSLV-Mk-II-D1
INSAT-3C	— GSLV-Mk-II
INSAT-3D	— GSLV-Mk-II
GSAT-1	— GSLV-Mk-I-D1
GSAT-2	— GSLV-Mk-I-D2
GSAT-3	— GSLV-Mk-I-D3
IRS-1D	— PSLV-C1 (Already launched)
IRS-P4	— PSLV-C2
IRS-P5	— PSLV-C3
IRS-P6	— PSLC-C4
Astronomy/Aeronomy Satellite	— PSLV-C5

Ground Tests by ISRO before Launching Satellites

1085. SHRI NARENDKA MOHAN: Will the PRIME MINISTER be pleased to state:

(a) whether ISRO conducts all the requisite tests on the ground before putting the satellites on the launch vehicles; and

(b) if so, the reasons for the failure of the INSAT-2D?

THE MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY AND THE MINISTER OF STATE OF THE MINISTRY OF POWER (SHRI YOGINDER K. ALAGH):

(a) Yes, Sir. All satellites are throughly tested on ground before launching them. Each subsystem package undergoes acceptance level tests e.g., thermal vacuum test and random vibration tests. After all the sub-systems are integrated, at the spacecraft level, performance tests such as thermovacuum test and acoustic test are carried out. Finally when the spacecraft is transported to the launch pad, performance tests—both mechanical and electrical—are carried out before the spacecraft is cleared for launch.

(b) INSAT-2D failure occurred due to an electrical shorting of one of the power buses.

MR. CHAIRMAN: The House is adjourned till 11 o'clock tomorrow.

The House then adjourned at three minutes past eleven of the clock till eleven of the clock on Friday, the 28th November, 1997.

MGIPRRND—68 GIPMR/99—300 COPIES